

## CLAIMS

What is claimed is:

1. A method for executing at least one of an alarm or an alert escalation process  
5 within a healthcare system comprising the steps of:

generating a signal that at least one of an alarm or an alert condition exists for a specific patient;

transmitting the signal relating to the alarm or alert condition to a first clinician's device;

10 indicating the alarm or alert condition on the clinician's device;

operating a timer; and,

escalating the signal if a response to the alarm or alert condition is not received prior to a predefined timer limit.

2. The method of claim 1, wherein the step of transmitting the signal to the first  
15 clinician's device comprises sending a wireless signal to the first clinician's device.

3. The method of claim 1, wherein the step of transmitting the signal to the first clinician's device comprises sending the signal to one of a mobile phone, a pager, an e-mail address, an instant messaging receiver or a conventional telephone.

4. The method of claim 1, wherein the step of transmitting the signal to the first  
20 clinician's device comprises sending the signal simultaneously to one of a mobile phone, a pager, an e-mail address, an instant messaging receiver or a conventional telephone.

5. The method of claim 1, further comprising the step of transmitting the signal to a charge clinician.

6. The method of claim 1, wherein the signal of the alert or alarm condition  
25 transmitted to the clinician's device comprises at least one of a condition description, a time, a date, a clinician identification, a patient name, a room identification, a bed identification and a prescription.

7. The method of claim 1, wherein the step of escalating the signal comprises providing a visual warning on the clinician's device.

8. The method of claim 7, wherein the visual warning is provided in at least one of  
30 a text or symbol warning on the clinician's device.

9. The method of claim 1, wherein the step of indicating the alarm or alert condition comprises providing a visual and audible warning at the clinician's device.

10. The method of claim 9, further comprising the step of allowing the audible

signal on the clinician's device to be silenced.

11. The method of claim 1, wherein the step of indicating the alarm or alert condition comprises providing a vibration notification.

12. The method of claim 1, further comprising the step of suspending the alarm or an alert escalation process following a response within the timer limit.

13. The method of claim 12, wherein the response comprises at least one of responding on the clinician's device or responding at a medical device exhibiting the alarm or alert condition.

14. The method of claim 1, wherein the step of escalating the signal if a response to the indicated condition is not received prior to a predefined timer limit.

15. The method of claim 1, wherein the step of escalating the signal further comprises the step of transmitting the signal to a second clinician's device.

16. The method of claim 15, further comprising the step of suspending the alarm or an alert escalation process for that specific alarm or alert condition following a response.

17. The method of claim 16, wherein the response comprises at least one of responding on either the first or second clinician's device, or responding at a medical device exhibiting the alarm or alert condition.

18. The method of claim 1, further comprising the step of clearing all notifications when a response is provided at the medical device.

19. The method of claim 1, further comprising the step of determining if the first clinician's device is active.

20. The method of claim 19, further comprising the step of transmitting the signal to a second clinician's device if the first clinician's device is not active.

21. The method of claim 19, further comprising the step of transmitting the signal to a charge clinician if the first clinician's device is not active.

22. The method of claim 1, further comprising the step of determining whether communication to the first clinician's device is lost.

23. The method of claim 22, further comprising the step of transmitting the signal to a second clinician's device if communication to the first clinician's device is lost.

24. The method of claim 23, further comprising the step of terminating the alarm or alert condition on the clinician's device when the condition is resolved.

25. The method of claim 1, further comprising the steps of:  
generating another signal relating to the second alarm or alert condition that a second at least one of an alarm or an alert condition exists for the same patient;

transmitting the signal to the first clinician's device;

indicating the second alarm or alert condition on the clinician's device;

operating a timer; and,

escalating the signal relating to the second alarm or alert condition if a response to the  
5 second alarm or alert condition is not received prior to a predefined timer limit.

26. The method of claim 25, wherein the step of escalating the signal relating to the second alarm or alert condition further comprises the step of transmitting the signal to a second clinician's device.

27. The method of claim 1, further comprising the steps of:

10 generating another signal that a second at least one of an alarm or an alert condition exists for a different patient;

transmitting the signal to the first clinician's device;

indicating the second alarm or alert condition on the clinician's device;

operating a timer; and,

15 escalating the signal if a response is not received prior to a predefined timer limit.

28. The method of claim 27, wherein the step of escalating the signal further comprises the step of transmitting the signal to a second clinician's device.

29. The method of claim 1, wherein the alarm or alert condition signal originates at a medical device.

20 30. The method of claim 29, further comprising the step of providing a communication lost message on the clinician's device when communication from the server or medical device is lost.

31. The method of claim 1, wherein the clinician's device is a personal digital assistant.

25 32. The method of claim 2, wherein the wireless signal is a wireless communication link that operates within a radio frequency.

33. The method of claim 1, wherein there is a many-to-many relationship between first clinicians and patients.

30 34. The method of claim 1, wherein there is a many-to-many relationship between first clinicians and charge clinicians.

35. The method of claim 12, further comprising the step of recording data concerning the alarm or alert condition.

36. The method of claim 12, wherein the data recorded comprises at least one of information about the alarm or alert, an identification of the clinician responsible for

responding to the alarm or alert, and a time of the alarm or alert condition.

37. A method for executing at least one of an alarm or an alert escalation process within a healthcare environment comprising the steps of:

generating a signal that at least one of an alarm or an alert condition exists for a specific patient;

transmitting the signal relating to the alarm or alert condition to a first clinician's device;

indicating the alarm or alert condition on the clinician's device;

operating a timer; and,

transmitting the signal relating to the alarm or alert condition to a second clinician's device.

38. The method of claim 37, wherein the clinician's devices are wireless personal digital assistants.

39. The method of claim 37, wherein the step of transmitting the signal relating to the alarm or alert condition to a second clinician's device is conducted if a response to the alarm or alert condition is not received prior to a predefined timer limit.

40. The method of claim 37, wherein the step of transmitting the signal relating to the alarm or alert condition to a second clinician's device is conducted if the first clinician's device is not active.

41. The method of claim 37, wherein the step of transmitting the signal relating to the alarm or alert condition to a second clinician's device is conducted if communication to the first clinician's device is lost.

42. The method of claim 37, further comprising the step of transmitting the signal to a charge clinician.

43. The method of claim 37, further comprising the step of checking preconditions prior to transmitting the signal to the first clinician's device.

44. The method of claim 43, wherein the step of checking preconditions comprises at least one of the steps of:

associating the patient with a medical device;

associating the patient with a clinician and identifying the clinician as a first clinician;

associating the first clinician with a clinician's device; and,

establishing a relationship between the patient, the medical device, the first clinician and the first clinician's device.

45. The method of claim 37, further comprising the step of providing for a charge

clinician to enable the escalation process.

46. The method of claim 37, further comprising the step of providing for a charge clinician to disable the escalation process.

47. The method of claim 37, further comprising the step of checking preconditions prior to transmitting the signal to the second clinician's device.

48. The method of claim 47, wherein the step of checking preconditions comprises the step of determining if a second clinician is assigned.

49. The method of claim 37, further comprising the step of terminating the signal relating to the alarm or alert condition to the clinician's devices after the alarm or alert condition is cleared.

50. The method of claim 37, wherein the step of indicating the alarm or alert condition on the clinician's device comprises providing for setting an audible alarm.

51. The method of claim 50, further comprising the step of silencing the audible alarm when an acknowledgment is received from the clinician's device.

52. The method of claim 37, further comprising the step of terminating the escalation process for the specific alarm or alert condition after the condition is cleared at a medical device exhibiting the alarm or alert condition.

53. A system for escalating an alarm or alert condition, comprising:  
a medical device having an alarm/alert module that identifies the existence of at least one of an alarm or alert condition;

a processor having software that receives a signal from the alarm/alert module relating to the alarm or alert condition, the processor further having a timer module that sets a timer limit;

a first clinician's device having a receiver that receives an alarm or alert condition signal from the processor, the first clinician's device further having a display to display text or an icon representative of the alarm/alert condition signal, and a speaker to provide an audible alarm or alert representative of the received alarm/alert condition signal; and,

wherein the processor escalates the alarm or alert condition signal if no response to the alarm or alert condition signal is received from either an input device at the first clinician's device or an input device at the medical device within the timer limit.

54. The system of claim 53, wherein the receiver on the first clinician's device is a wireless receiver.

55. The system of claim 53, wherein the processor has a memory, the memory storing preconditions.

56. The system of claim 53, wherein the preconditions comprise at least one of a clinician and a patient association, an association for the patient and a medical device, an association for the clinician and the clinician's device.

57. The system of claim 53, further comprising a transmitter that sends the alarm or alert condition signal from the processor to the receiver of the first clinician's device.

58. The system of claim 53, wherein the transmitter sends the alarm or alert condition signal to from the processor to a second clinician's device when no response to the alarm or alert condition signal is received from either an input device at the first clinician's device or an input device at the medical device within the timer limit.